

Application No.: 09/729,395
Amendment dated: November 14, 2005
Reply to Office Action of May 19, 2005
Attorney Docket No.: 58847-012 (NMIK-001)

Remarks

Claims 2-17 and 19-35 are currently pending in the present application, of which claims 32-34 are independent claims. Prior independent claims 1 and 18 were previously cancelled by amendment and replaced with claims 32 and 33, respectively. Claims 2-13, 15, 19-23 and 32-35 have been rejected under 35 U.S.C. §102 and claims 14, 16, 17 and 31 have been rejected under 35 USC §103. Applicant hereby traverses the rejections and requests reconsideration and removal thereof, as discussed in detail below.

Rejections Under 35 U.S.C. §102

The Office Action rejects claims 2-13, 15, 19-23 and 32-35 under 35 U.S.C. §102(e) as being anticipated by US Patent No. 6,870,842 B1 to Caronni et al ("Caronni"). Thus, each of the currently pending independent claims 32-34 has been rejected under §102 based on Caronni.

For a claim to be invalid under §102, the reference must teach the identical invention. Specifically, the Federal Circuit has held that:

The identical invention must be shown in as complete detail as is contained in the ... claim.

Richardson v. Suzuki Motor Co., 868 F.2d 1226,
1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)

Furthermore, to be invalid under §102 every element of the claim must be anticipated by a prior art reference. The Federal Circuit has also specifically held that:

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

Verdegal Bros. v. Union Oil Co. of California, 814
F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)

Independent claim 32, which has been amended herein, is reproduced below in clean form and will be addressed first.

32. A method of establishing a private network community (PNC)
among a plurality of clients configured to have access to one or more

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of a set of communication channels, said method comprising:

- A. providing a virtual network generation (VNG) system including a VNG data store, the VNG system accessible via the set of communication channels;
- B. storing in the VNG data store PNC information including information identifying said plurality of clients and information identifying a set of PNC network attributes;
- C. for each of the plurality of clients, providing a client module configured to emulate a network interface device, as a virtual network interface card (NIC);
- D. accessing the VNG system by the plurality of clients and authenticating each of said plurality of clients with the VNG system by comparing information provided by the plurality of clients with said PNC information; and
- E. establishing said PNC as a function of the PNC information, including:
 - a. designating a virtual PNC address for each of said plurality of clients;
 - b. linking each of said plurality of clients via a corresponding virtual NIC for communication within the PNC using the virtual PNC address of each of the plurality of clients and the set of PNC network attributes; and
 - c. emulating local area network (LAN) communications among the plurality of clients by the VNG system.

In this case, Caronni does not identically teach each and every element of claim 32. Caronni teaches (and relies on) utilizing "multicasting" as the underlining technology driving its invention. This is clearly discussed in the all sections of the Caronni patent, including the Abstract, Summary of Inventions, Detailed Description and Claims. As taught, a "Supernet" consists of one or more channels, wherein each channel has a set of assigned "nodes." Caronni's "multicasting" is described as broadcasting each received communication to each and every node on a given channel. This is accomplished by creating a "multicast address" that serves as a sort of group address for all clients on the channel. As clearly stated in Caronni:

... The Supernet also uses multicast communication to create Ethernet-like communication between its nodes. In using multicasting, each communication of each node on a channel in the private network is sent to a multicast address which sends it to all of

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the nodes on the channel. Sending a copy of every communication to all of the other nodes on the channel makes system tasks, like debugging, easy for the nodes on the channel. ...

Abstract, Caronni (see also, col. 6, lines 45-59)

In contrast, the present invention does not require or claim multicasting or create a multicast address – as required and taught by Caronni. In Caronni, as a consequence of its multicasting approach, a server node is disposed in the middle of the communication path between client nodes – since the server node receives each communication and then multicasts it to all of nodes on the designated channel. True peer-to-peer communication, without this intermediate multicasting, is apparently not feasible within Caronni. In contrast, the claimed method is not burdened by such an intermediate addressing structure or process, so allows and enables peer-to-peer communication. This is possible with the present invention because it does not use multicasting as described in Caronni, and no intermediate node is required to receive packets from one node and actively address the received packet for communication of other nodes. In the present invention, once the PNC is established, the clients communicate without active participation of an intermediate node as required in Caronni.

Fundamentally, systems and methods for networking are distinguished by the core manner in which they facilitate and manage communications among and between their networked elements. Differences in the core approaches to communications result in different systems and methods for networking. The present invention and Caronni are distinguished, fundamentally, at their core approaches to facilitating and managing communications. In the present application, the claimed systems and methods include emulating a network interface card (NIC) on each client (or client device), which is referred to as a “virtual NIC.” In contrast, Caronni states that its multicasting is the basis of its “Ethernet-like communication between nodes.” (Caronni, col. 4, lines 53-55) The virtual NIC scheme in the present application assures operating system transparency to the clients, which enables truer LAN-like communications among the client devices, including peer-to-peer communication, without intervention for multicasting. As another example, utilizing the virtual NIC scheme of the present invention (e.g., see Present Application, Fig-3. Fig-4) assures accessibility to

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all of the host-client's resources by the other PNC clients. The present invention accomplishes LAN-like virtual network without multicasting and without the use of operating system dependant login scripts as used by Caronni, because the present invention is operating system agnostic. (See Caronni, col. 8, lines 10-34). Given the fundamental differences in the core communication approaches between the present invention and Caronni, Caronni cannot and does not anticipate the present application.

More specifically, claim 32 has been amended to clarify the above distinction. Most notably, element C has been added and directly includes the virtual NIC discussed above. Each element of claim 32 is discussed below for completeness.

Claim 32, Element A

A. providing a virtual network generation (VNG) system including a VNG data store, the VNG system accessible via the set of communication channels;

Caronni does not teach, identically and in complete detail, a *virtual network generation system* as in this claim element - as required by *Richardson and Verdegaal Bros.* to support a rejection under §102. The Office Action explicitly referenced portions of Caronni that discuss the multicast Supernet. To accomplish multicasting, Caronni teaches the generation of a "multicast address" that includes all of the nodes of a given channel. The VNG system provided under this claim element does not require multicasting nor does it generate a multicast address to accomplish multicasting. For security preferences, the VNG system of this claim has only data routing capabilities and not client-related packet deciphering or address translation capabilities.

Additionally, Carroni teaches away from the present application by stating (see col. 7, lines 35-42) that the same component (i.e., VARPD) plays 2 roles, both server and client. In the present application, the VNG system does not include such a dual purpose component. That is, in the present invention, a client does not assume the role of the VNG system.

For the above reasons, Caronni does not anticipate providing a VNG system has required by this claim element.

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Claim 32, Element C

C. for each of the plurality of clients, providing a client module configured to emulate a network interface device, as a virtual network interface card (NIC);

Caronni does not teach, identically and in complete detail, *providing a client module configured to emulate a network interface device, as a virtual network interface card (NIC)* as in this claim element - as required by *Richardson and Verdegaal Bros.* to support a rejection under §102. As discussed above, Caronni does not teach a virtual NIC at each client. Caronni teaches a fundamentally different communications approach including generating a multicast address and multicasting each communication to every node on a corresponding channel. The virtual NIC of this element allows true, LAN-like communication among clients, including peer-to-peer communication, without multicasting to all clients. As a result, unlike Carroni, utilizing the virtual NIC scheme of the present invention (e.g., see Present Application, Fig-3, Fig-4) assures availability to all of the hosts' resources to the PNC clients, via the PNC. Additionally, the virtual NIC approach of this present invention enables the VNG systems and methods to utilize a centrally managed, but distributed architecture for their PNCs. Given that Caronni does not teach the use of virtual NICs, Caronni cannot and does not anticipate this element.

Claim 32, Element E. b.

E. establishing said PNC as a function of the PNC information, including:

- a. designating a virtual PNC address for each of said plurality of clients;*
- b. linking each of said plurality of clients via a corresponding virtual NIC for communication within the PNC using the virtual PNC address of each of the plurality of clients and the set of PNC network attributes; and*
- c. emulating local area network (LAN) communications among the plurality of clients by the VNG system.*

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Caronni does not teach, identically and in complete detail, linking each of said plurality of clients via a corresponding virtual NIC for communication within the PNC or emulating local area network (LAN) communications as in this claim element - as required by *Richardson and Verdegaaal Bros.* to support a rejection under §102. As discussed above, Caronni does not teach a virtual NIC at each client or communication using a virtual NIC. Use of the virtual NIC allows truer LAN-like communications among clients. In the present invention peer-to-peer communications is enabled, without an intermediate server for multicast addressing. Additionally, the virtual NIC of this claim allows access of each client's resources, which is not discussed at all by Caronni. Instead, Caronni teaches using multicasting to establish "Ethernet-like communications," but none of the above virtual NIC-based features are discussed or, apparently, possible with Caronni's approach. Thus, Caronni cannot and does not anticipate this element.

In summary, Caronni does not identically teach each and every element of claim 32, now amended. Reconsideration and withdrawal of this rejection is respectfully requested. For the same reasons, claims 2-13 and 15, which depend from claim 32, are also not anticipated by Caronni and reconsideration and withdrawal of those rejections are also respectfully requested.

Claim 33 is a system claim corresponding to claim 32, and has been amended in a similar manner for clarification. For the same reasons as put forth for claims 2-13, 15 and 32, reconsideration and withdrawal of the rejections to claims 33 and its dependent claims 19-23 are respectfully requested.

Claim 34, now amended for clarification, is a method claim having elements corresponding to those discussed above and distinguished from Caronni, such as the virtual NIC. For the same reasons as put forth above for claims 2-13, 15 and 32, reconsideration and withdrawal of the rejections to claim 34 and its dependent claim 35 are respectfully requested.

Rejections Under 35 USC. §103

The Office Action rejects claims 14, 16, 17 and 31 under 35 U.S.C. §103(a) as being unpatentable over Caronni in view of US Patent No. 6,487,600 to Lynch ("Lynch"). Each of claims


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14, 16 and 17 depends from independent claim 32 and claim 31 depends from independent claim 33. Central to each rejection under §103 is the assertion that independent claims 32 and 33, and perhaps dependent claims thereof, are anticipated by Caronni. However, as discussed and shown above, Caronni does not anticipate claims 32 and 33. Therefore, the combination of Caronni and Lynch does not make obvious claims 14, 16, 17 and 31. Accordingly, reconsideration and withdrawal of the rejections to claims 14, 16, 17 and 31 are respectfully requested.

Conclusion

Applicant respectfully requests removal of the foregoing rejections and allowance of claims 2-17, 19-35, as variously amended herein. The Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. §1.16 and §1.17 that may be required, or credit any overpayment, to our Deposit Account No. 50-1133.

Respectfully submitted,


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